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ABSTRACT

The Oregon University System (OUS) awarded about 3,600 advanced degrees in the 1999-2000 academic year. This study examined the more immediate consequences of earning an advanced degree through a survey of degree recipients. The study used a random sampling procedure to meet 92.5% confidence intervals for the survey, which consisted of 1,063 telephone interviews in spring 2001. Two-thirds of the advanced degree recipients were in their 20s and 30s, and 60% were women. Respondents were predominantly white (85%). The reasons most often given for getting the degree were "personal fulfillment," "learn new job or occupation," and "increase potential to earn higher income." Ninety-three percent of respondents were working for pay, with 81% full-time employees. Of these, 63% were employed in the public sector, 24% in the private sector, 8% in a nonprofit organization, and 3% self-employed. The median income for all respondents was $37,300, but the income for males was nearly 30% greater than that for females. Eight in 10 respondents had received some type of financial aid or monetary help to attend graduate or professional school. Two-thirds of respondents said that the value of their education exceeded the cost and almost half said the value was greater than they expected. (Contains 18 figures.) (SLD)

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ED 468 173

Oregon University System

The Status of the 1999-00 Advanced Degree Recipients: One Year Later

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I. Executive Summary

The Status of the 1999-00 Advanced Degree Recipients: One Year Later

The Oregon University System awarded nearly 15,000 degrees and certificates in 1999-00. Of these, nearly 10,000 were bachelor's degrees and slightly more than 3,600 were advanced degrees (i.e., 3,068 master's, 225 professional, and 327 doctoral degrees).

The Oregon University System (OUS) contracted with the University of Oregon's Oregon Survey Research Laboratory (OSRL) to conduct a study of the more immediate consequences of earning an advanced degree from one of the OUS institutions in 1999-00. The study used a random sampling procedure to meet 92.5% confidence intervals for the survey. OSRL conducted a total of 1,063 telephone interviews in spring 2001. These interviews averaged 14 minutes in length and most questions called for respondents to select from fixed-alternatives.

Findings

Who was interviewed for this survey?
Nearly 60% of those interviewed were women and 91% were citizens of the United States.

Two-thirds of OUS advanced degree recipients in 1999-00 interviewed for the survey were in their twenties (32%) and thirties (36%).

The racial/ethnic composition of the interviewees was predominately white (85%) with 7% Asian/Pacific Islander, 3% Hispanic/Latino, 1% Black/African American, and 1% American Indian/Alaska Native.

What were their reasons for pursuing an advanced degree?
The top three most important reasons given for pursing an advanced degree included "personal fulfillment" (32%), "learn new job, occupation, or line of work" (13%), and "increase potential to earn higher income" (13%).

What are these advanced degree completers doing one year later?
Ninety-three percent said they were "working for pay," with 81% "full-time" and 12% "part-time." Only 1% of those interviewed said they were "unemployed and looking for work." Of those employed, nearly 7 in 10 were employed in Oregon.

Of those out of the labor force, 3% are "taking classes full-time" and the remaining 3% are volunteers, homemakers, retired, or disabled.

What is their employment by sector?
Of those employed full- or part-time, 65% were employed in the public sector, 24% in the private sector, 8% in a nonprofit organization, and 3% said they were "self-employed."

How many are using multiple languages in the workplace?
One-quarter of those employed said they use a language other than English on the job. Of those who reported using a second language on the job, more than three-quarters were employed by a public sector agency (including public schools) and more than half earned advanced degrees in education. The majority used Spanish, the most commonly used language in the state after English.

What is the personal income for graduates one year later?
The respondents were asked to disclose their level of personal income within ranges. The median income for all respondents was $37,300. However, when comparing the median income by gender, the median income for the males at $43,800 was nearly 30% greater than the median income for females at $34,800. These differences may be attributed, in part, to career choices.

There are also income differentials by level of educational attainment. Individuals who completed master's degrees in education tended to earn slightly less than those who completed master's degrees in other fields ($35,500 compared to $37,700). Those who earned doctoral degrees had median incomes slightly higher than those who earned professional degrees ($47,200 compared to $45,000) in the first year after completing their degrees.

How did they finance their education?
Eight in ten respondents indicated they received some type of financial aid or monetary help to attend graduate or professional school.

Of those who received financial aid, 37% said they received a graduate student assistantship the majority of which included a tuition waiver, 32% received financial support or gifts from a family member, usually a spouse, and 24% received assistance from an employer (e.g., tuition contribution, paid leave to take classes).

Beyond assistance that does not require repayment, 63% said they "borrowed money, took out a loan, or ran up expenses on a credit card" to help pay for graduate or professional school. The median amount borrowed by respondents was $15,000.

In addition, 60% indicated they worked while attending graduate or professional school.

What are their views on the cost and value of their education?
Two-thirds of those interviewed said the value of their education "exceeded the cost" and almost half said the value of their degree was "greater than they expected."

Are they satisfied with the quality of education they received?
Three-quarters of those interviewed rated highly their graduate or professional education experience and would select the same institution again if they had to do it over again.

GRADUATE PROFILE

1999-00 OUS ADVANCED DEGREE RECIPIENTS – ONE YEAR LATER

OUS awarded a total of 3,620 advanced degrees in 1999-00.

We interviewed nearly one-third.

Demographics:

- 59% Female
- 58% 25-35 years old
- 85% White

Labor force status:

- 93% Employed (81% full-time)
- 1% Unemployed
- 3% Taking classes
- 3% Other

Employment:

- 69% Oregon
- 11% California and Washington
- 65% Public sector
- 24% Private sector
- 49% Education/training occupations

Satisfaction:

- 78% Completed degree within time expected
- 76% Rated quality high ("4" or "5" on 5-point scale)
- 74% Would be "repeat customers"
- 67% Believed "value of degree exceeded cost"

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

II. The Status of the 1999-00 Advanced Degree Recipients: One Year Later

Overview

This is the sixth report prepared regarding the economic status and satisfaction of graduates of institutions in the Oregon University System (OUS). It focuses on advanced degree completers in 1999-00 from six to twelve months after completing their degrees. The data were collected and analysed by the University of Oregon's Oregon Survey Research Laboratory (OSRL). OSRL conducted telephone interviews of 1,063 graduates for this study.

OUS began these studies in response to queries from business leaders and policy makers:

- Are graduates satisfied with the quality of education received?
- Are OUS graduates employed after receiving their degrees?
- Is OUS producing enough degrees to meet the workforce needs of Oregon's changing economy?

These reports are one part of the accountability processes of the OUS.

Background of OUS Accountability Processes

The higher education assessment movement in the United States began in the 1980s. In the early 1990s, the Chancellor's Office supported two quality assurance initiatives related to setting higher undergraduate standards and providing evidence of student learning outcomes — the Proficiency-based Admissions Standards System (PASS) and the Oregon Assessment Framework ("Framework").

Demands to demonstrate undergraduate student learning outcomes as part of institutional and programmatic goals and requirements in Oregon came from the Oregon Progress Board and regional accreditation agencies. In the mid-1990s, OUS adopted the Framework as a conceptual tool for campuses to review their assessment processes. Chancellor's Office funds supported the efforts of OUS campuses to explore new assessment approaches in less developed assessment areas. As part of this effort, OUS with the input of campuses, developed a survey to determine if OUS graduates were not only successful in attaining their purposes of finding employment or continuing one's formal education, but also satisfied with their educational experiences.

<u>Shift to Accountability</u>

The State Board of Higher Education adopted four goals — access, quality, employability, and cost effectiveness — that became etched into Oregon law with the passage of Senate Bill 919 by the 1997 Oregon Legislative Assembly. This law directed the System to develop performance measures and indicators of these four goals. Over the next several years, the identification of performance indicators began in earnest and involved the Board, Chancellor, and senior

institution administrators (presidents, provosts, administration vice presidents) with the Vice Chancellor for Academic Affairs taking the lead.

Although the list of potential indicators expanded to more than 40 indicators at one point in 1998, OUS settled on ten key indicators common to all campuses and two indicators unique to each campus in 2000. A few of the measures of graduate success envisioned in the Framework became performance indicators. And, in so doing, undergraduate assessment became incorporated into the accountability process. The focus shifted from assessing exclusively undergraduate student performance to assessing institutional performance on a wider range of factors. The performance indicators were used to describe performance trends and monitor improvements in student performance (e.g., freshmen persistence and six-year graduation rates), degrees awarded, graduate success and satisfaction, and research and development funds awarded. When used only to describe performance, the stakes for accountability were quite low for both the System and individual institutions.

With the adoption of a new Resource Allocation Model (RAM) in 1999, the use of indicators inched toward higher stakes. One of these targeted programs in the RAM was performance funding which provided incentives to campuses that improved performance.

- In the 1999-2001 biennium, $730,000 was set aside for performance funds, which represents .12% of the state's contribution of $628 million to the System's Education and General program.

- In the 2001-2003 biennium, $2 million has been set aside for performance funds, which represents .30% of the state's contribution of $674 million to the Education and General program.

During the 1990s, accreditation reviews shifted from asking institutions for their plans for assessing student progress to requiring information about assessment results. Reviews by the Northwest Association of Schools and Colleges in the late 1990s raised a few issues with OUS institutions about their lack of assessment efforts tied to the undergraduate curriculum. The original goals of the OUS assessment effort were supported and became enforced through these external accreditation review processes. The national accountability initiative represents a change in the culture of the academy. Traditionally, faculty have made assessments of the work of undergraduates on a course-by-course basis. The university transcript is a collection of this information. On the other hand, the newer assessments require looking at what is gained from the college experience from a more holistic and integrated perspective.

Focus on Graduate Outcomes

The performance indicators adopted by the Board of Higher Education included satisfaction of graduates with and rating of the educational experience and success of graduates (i.e., either employed, enrolled in an advanced degree program, or not working but not looking for employment). To gather this information, OUS has relied on surveys of graduates using lists

provided by the campuses. Many institutions independently survey their graduates from a number of perspectives and share findings within their communities.

Data obtained from the studies of recent graduates are used to develop performance trends and set improvement targets for two performance indicators: graduate satisfaction and graduate success (defined as employment and/or continuing one's education). Both graduate satisfaction and graduate success are among the ten key performance indicators. Graduate satisfaction is one of the five common indicators tied to performance incentives for which campuses set improvement targets.

OUS gathers data about graduates at two critical points. OUS surveys recent degree recipients between six and twelve months after their degrees are awarded. These surveys called "One Year Later" are conducted annually to provide data for performance indicators. OUS also surveys graduates who completed degrees at least five but no more than ten years earlier. These surveys called "Return on Investments" are conducted every three years or so. Bachelor's degree recipients are surveyed separately from advanced degree recipients. OUS also conducts surveys on an *ad hoc* basis for specific occupational groups such as individuals who complete teacher licensure programs.

Survey of 1999-00 Graduates

OUS institutions awarded nearly 15,000 degrees and certificates in 1999-00. Of these, almost 10,000 were bachelor's degrees and over 3,600 were advanced degrees (i.e., 3,068 master's, 225 professional, and 327 doctoral degrees). The ratio of undergraduate to graduate/professional degrees produced by OUS is nearly four to one, but varies by campus.

OUS contracted with the University of Oregon's Oregon Survey Research Laboratory (OSRL) to conduct the studies on the more immediate consequences of earning a degree from one of the OUS institutions in 1999-00. The broad goal of the survey was to obtain information from advanced degree recipients from six OUS institutions. [1]

The interview survey was developed collaboratively by the Chancellor's Office, campuses, and OSRL.[2] Responses to questions provide information about the reasons for pursuing a degree; student experiences; occupation, income, employment sector, and location; and student demographic characteristics.

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[1]OIT did not participate because only one student completed a master's degree in 1999-00, and OIT suspended the master's degree program in 2000-01.

[2]OSRL pretested questions for clarity, accuracy, validity, and variability of response before pretesting the entire instrument for flow, comprehensiveness, and length.

Sample and Data Collection

The study used a random-from-list sampling procedure with quotas, implemented by OSRL. OSRL determined the sample sizes needed to meet 92.5% confidence intervals for the survey, based on the number of advanced degree recipients in 1999-00.[3]

Each institution provided OSRL with a list of alumni and basic alumni information maintained by their alumni associations. OSRL randomly selected names from these lists to interview by telephone. Recent graduates residing outside the United States were excluded from the study to contain costs associated with international telephone calls. The extent to which alumni association lists accurately represent institutional populations is unknown.[4]

OSRL completed 1,063 interviews from late April to early June 2001. These telephone interviews averaged 14 minutes in length. The majority of questions required respondents to select from fixed responses, but several provided opportunities to comment freely. Open-ended questions asked respondents to identify their occupations, their perceptions of the strengths of their graduate programs, ideas for changing their graduate programs, and institutions where they are now pursuing another advanced degree (e.g., most often a doctorate after completing a master's degrees).[5]

Findings

The OUS institutions awarded over 3,600 advanced degrees. Of these, nearly 85% were master's degrees, 9% were doctoral degrees, and 6% were first professional degrees (e.g., law, pharmacy, and veterinary medicine). Of the advanced degrees awarded by OUS institutions, 1,228 were in education, 388 in business, 275 in humanities and fine and performing arts, 188 in engineering, 184 in social sciences, and 77 in computer science. *(Figure 1)*

Sample Representativeness. Nearly a third of the 1999-00 advanced degree completers were surveyed to determine what they are doing within a year after completing their educational programs. Those interviewed were generally representative of the population by degree category *(Figure 2)*.

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[3]OSRL developed quotas for each institution within four degree categories including education master's degree, non-education master's degree, professional degree, and doctoral degree.

[4] Four of the sixteen quotas had insufficient cases to satisfy the minimum sampling size (i.e., WOU non-education master's degrees, OSU professional, OSU education master's, and PSU doctorates). This may reflect the tendency for affiliation at the program level for some graduate and professional degree recipients instead of joining institutional alumni associations.

[5] OSRL coded the open-ended responses to the workforce-related questions according to the Census 2000 industry and occupation codes. These codes were revised from previous Censuses (as well as OUS surveys) to better reflect the growth of professional/technical occupations in the changing economy. Staff in Academic Affairs coded the open-ended responses to the other questions.

Women and men also obtain different degrees. For example, 70% of all master's degree in education were awarded to women and 58% of the doctorates were awarded to men.

The median age for graduates is 36 years of age. OSU and UO graduates, and those who obtained professional degrees, tend to be younger than average and are more likely to be male. Women are over-represented in the older age categories. Although we lack comparative OUS data about age of advanced degree completers, the sample reflects the general tendency for students enrolled in professional schools (law, veterinary medicine, and pharmacy) to be younger than students enrolled in master's programs in education. (*Figure 3*)

Of those who were interviewed, slightly more than 12% are people of color. In this study, people of color comprised somewhat larger-than-expected proportions of doctorates (19%), non-education master's degrees (17%), and professional degrees (14%). Compared to other people of color who were interviewed, substantially more graduates of Asian and Pacific Island descent obtained doctorates and non-education master's degrees. (*Figure 4)*

Reasons for Pursuing an Advanced Degree. Respondents were asked to consider seven reasons for pursuing advanced degrees. These reasons included, "improve their knowledge generally", "personal fulfillment," "increase personal income," "change their career," "advance in their current career," "improve their skills," and "obtain or renew a license or certificate." (*Figure 5)*

Ninety percent of those interviewed said they pursued an advanced degree to "improve their knowledge," and 85% say they pursued their degree for "personal fulfillment." The five reasons associated with employment received affirmative responses from as high as 65% for "increase income" to a low of 34% for "obtain or renew a license or certificate."

After being prompted to a range of possible reasons, each person was asked to select their two most important reasons for pursing an advanced degree. "Personal fulfillment" emerged as the number one reason for pursuing their degree with the other two-thirds spread equally among the remaining six reasons. Between 10% and 13% each selected "improve knowledge" or one of the five discrete employment-related reasons. On the other hand, 57% of the survey respondents selected an employment-related reason when these reasons are combined. These data suggest that the reasons for pursuing an advanced degree are multiple and individualistic, but concerns about employment, skills and income are foremost on the minds of these respondents.

Labor Force Participation. The labor force participation of OUS graduates is higher than that for the state's population. Nearly all those interviewed who completed advanced degrees were employed (93%) one year later, with 81% "full-time" and 12% "part-time." Only 1% of those interviewed said they were "unemployed and looking for work." Of those out of the labor force, 3% are full-time students and another 3% are volunteers, homemakers, retired, or disabled. We did not ask a question to find out if graduates believe they are underemployed (e.g., job does not utilize their skills, the job doesn't require an advanced degree). (*Figure 6)*

Continuing Education. Slightly less than 4% said they were "enrolled full-time" or "equally employed and taking classes" in response to a question about labor force status. Another questioned asked if they were taking classes at a college or university, 17% said "yes." Of those 178 people, two thirds were working towards degrees, certificates or licenses in public universities (83%), private colleges (14%) and community colleges (2%). Although the majority attended universities in Oregon, several were completing their graduate studies at other institutions across the country including Stanford University, Harvard University, University of California, and the University of Washington.

Employment by Location. Of those who are employed, 80% took jobs on the west coast (69% in Oregon and 11% in Washington and California combined). *(Figure 7)*

Of those employed in Oregon, one-third reported working in Portland's tri-county area (18% in Multnomah, 10% in Washington, and 5% in Clackamas Counties). The next largest locations were 16% in Lane County, 11% in Linn/Benton Counties, 10% in Jackson County, 7% in Marion County and 3% each in Umatilla and Deschutes Counties.

Employment by Sector, Industry and Occupation. Two-thirds of those employed in Oregon took public sector jobs. *(Figure 7)* In order to better understand the employment context for recent graduates, they were asked to identify the industry and occupation in which they worked.

Graduates' employment concentrates highly in the industry sector called "services." (*Figure 8*) Graduate degree recipients reported employment in a wide range of occupations. Nearly half work in teaching, education, training, or library positions; and 11% work in management-related positions. About 6% each work in the sciences, community and social services, and business or financial operations. Another 20% are distributed across the remaining 15 broad occupational groups. (*Figure 9*)

When asked how their current jobs match the career objectives they had when they graduated, 41% of the respondents answered that they matched "completely," 32% said "a lot," 16% said "some," 5% said "very little," and 6% said "not at all." The interviewers asked the 11% whose jobs do not match their career objectives if this discrepancy was by choice, and the majority replied "yes."

At 94%, nearly all those employed are satisfied with their current jobs (61% "very satisfied" and 33% "somewhat satisfied"). Of those seeking new jobs (n=272), 64% would prefer a position more closely aligned with their career objectives or degrees, and 91% would prefer a full-time job.

Second Language Use in the Workplace. Because of the changing demographics in Oregon, we asked those interviewed whether they used a language other than English in their workplaces. One-quarter of those interviewed said they use a second language in the workplace, 76% were working in public sector jobs as teachers, social services providers and interpreters, and another 15% in private firms. Many of these respondents reported being of Hispanic/Latino or Native American descent. *(Figure 10)*

The majority of those interviewed used Spanish, the most common language in Oregon after English. This appears to follow two trends. First, Oregon has a growing population of school-age children who are of Hispanic/Latino descent and do not speak English in the home. Second, high school students are enrolling in Spanish classes in record numbers to fulfill foreign language requirements in high school and for college admission.

The respondents' comments suggest a wide range of second language proficiency. Some teach a foreign language in high schools. Others use a second language conversationally with clients and students whose native language is not English.

According to the Oregon Employment Department, careers that commonly use multilingual skills include banking and finance occupations, human resources, interpreters, journalists, nursing and other medical occupations, social workers, and teachers. The Oregon Employment Department noted that more job announcements are calling for second language skills *(Oregon Labor Trends,* May 2001*)*.

Income of Graduates. The respondents were asked to disclose their level of personal income within ranges.[6] Only a few refused. The U.S. Census Bureau advises that there is a tendency for respondents in surveys to report wage and salary income more accurately than other sources of income.

For all respondents, 40% earned between $25,000 and $40,000; and another 32% earn between $40,000 and $70,000. The median income for all respondents was $37,300. The survey also found income disparity between males and females. The median income for male respondents of $43,800 was considerably higher the median income of $34,800 for female respondents. These differences may be attributed, in part, to career choices. Many women pursue careers in teaching and other lower paying fields in the public sector.

The median income for those respondents working full-time was about $40,500 compared to $18,700 for those working part-time. The median income for respondents that were employed in the private sector was about $59,700 compared to $39,400 for those employed in the public sector. *(Figure 11)*

In the higher income brackets the respondents tended to have completed professional and doctoral degrees, and correspondingly degrees from OSU, PSU, and UO (i.e., it is not within the

[6] The U.S. Census Bureau defines personal income as the earnings and other money income (exclusive of certain money receipts such as capital gains) before payments for personal income taxes, social security, union dues, and medical deductions. Using this definition, income includes unemployment compensation, social security, supplemental security income, rents, royalties, and estates and trusts, educational assistance, alimony and child support, interest and dividends. Money income does not reflect income received in the form of non-cash benefits such as food stamps, health benefits, rent-free housing, and goods produced and consumed on a farm. Money income also does not reflect that non-cash benefits are also received by nonfarm residents such as use of business transportation and facilities, full-or partial payments by business for retirement programs, medical expenses and educational expenses, etc.

missions of EOU, OIT, SOU, and WOU to offer professional and doctoral degrees). The income premium for completing a professional or doctoral degree is about $10,000 more than a master's degree. In this survey, the median income for respondents by degree level follows:

- $47,200 for a doctoral degree ($43,750 for men and $42,927 for women);
- $45,000 for a professional degree ($41,668 for men and $40,833 for women);[7]
- $37,000 for a master's degree ($41,980 for men and $29,586 for women).

The "gender gap" is greatest for respondents who earned a master's degree from one of the OUS institutions (more than $12,000) compared to those who earned either a professional or doctoral degree (less than $1,000).

This survey confirmed what we know about the relationship between the level of education attained and level of personal income. On average, those who complete more education have higher earnings. The most recent data on the median income of those 25 years of age and older by educational attainment level and gender reported by the U.S. Census Bureau (2000) provide an interesting comparison to the median income of the recent OUS graduates. *(Figure 12)* The discrepancies between the median income levels of OUS respondents compared to the 2000 Census are greater for males than females.

- The median income for women in the OUS survey compared to the median incomes of women in the 2000 Census is about $5,000 less for professional and doctoral degrees and $10,000 less for master's degrees.
- The median income for men in the OUS surveys compared to the median incomes for men in the 2000 Census is about $17,400 less for master's degrees, nearly $28,000 less for doctoral degrees and nearly $40,000 less for professional degrees.

It is noteworthy that these data are from entirely two different survey populations — the OUS survey includes only those who recently completed an advanced degree in Oregon and the U.S. Census includes recent advanced degree recipients as well as those well established in their fields from throughout the Unites States. Despite their different sources, however, they suggest that, on average, male graduates who earn advanced degrees have greater potential for income growth than females who earn advanced degrees, particularly master's degrees. Some of these discrepancies are explained, in part, by choices in field of study, level of study, occupation, and industry. The teaching profession, which is dominated by females, is characterized by a pay scale that reaches a maximum salary based on degree level and number of years of service. Distinguished performance does not necessarily correlate with salary differentials.

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[7] Because the population of professional degrees provided by OSU was insufficient to meet their quota, the professional degrees are more likely to be lawyers who graduated from the UO. Further, OSU's population for doctoral degrees also did not meet quotas. Consequently, the median incomes for doctorates may be lower than would be expected. OSU's doctorates tend to be in high technology fields associated with higher incomes.

Financing Advanced Education. The interviewers asked these advanced degree completers whether the cost of their education was what they expected. About 60% indicated that the cost was what they "expected" compared to 32% who said it was "greater than expected" and only 7% indicated it was "less than expected."

Most graduates (83%) received some monetary assistance to pursue their degrees. Graduates reported using a variety of ways to finance their education: personal loans and credit card charges, graduate teaching or research assistantships, financial support from family members or spouses, other awards, contributions from employers, and work-study opportunities. *(Figure 13)*

- Nearly one-third report receiving a stipend as a teaching or research assistant with tuition costs covered.

- About half report securing personal loans or using their credit cards to pay for their education.

The median amount of money borrowed was $15,000. Thirty percent of those with loans borrowed $9,000 or less, another 30% borrowed $10,000 to $19,000, 20% borrowed $20,000 to $29,000, 11% borrowed $30,000 to $49,000, and 9% borrowed $50,000 to $90,000. In addition, about 60% worked full- or part-time during the academic year while they worked on their degrees.

The availability of stipends for teaching and research assistantships is often cited as critical to recruiting top graduate students *(The Chronicle of Higher Education*, September 28, 2001*)*. Often the availability of stipends is highly dependent on the sponsored research and development grants secured competitively by the institutions. The availability and amount of stipends available is one of several factors prospective graduate students consider in making their institutional selection decisions. For example, the stipend for a graduate student in English at the University of Oregon is $9,540 compared with $9,937 at the University of Minnesota — Twin Cities, $15,000 at Columbia University, and $16,338 at Stanford University. Many institutions report providing higher stipends to graduate students enrolled in the sciences and engineering fields.

Students attending Oregon State University and the University of Oregon are more likely to have access to these graduate support resources compared to the other OUS campuses because of their considerably larger revenues from gifts, grants and contracts associated with a greater breadth of doctoral programs and basic and applied research activities (i.e., mission differences).

When asked what they might change about their programs, several mentioned the availability of financial aid, especially grants and tuition waivers that would not have to be paid back. "*That's easy...more support, financial support for graduate students. Not especially for me because I was lucky, but for others definitely.*" Another recent graduate commented, "*I would like to see the tuition waiver extended to books and student fees [and] all graduate students provided with health and dental insurance like the faculty.*"

In this time of revenue constraints, providing greater stipends and benefits to graduate students presents a challenge to university leaders. Nationally, public research institutions are finding it more difficult to compete for top graduate students. Private research universities offer larger and more attractive support packages to graduate students. According to *The Chronicle*, prospective graduate students are more savvy consumers and balance stipends, benefits, and cost of living in their decisions to attend one institution over another *(The Chronicle of Higher Education*, September 28, 2001*)*. Since the quality of graduate students is critical to competing for top faculty and the external resources they attract, these observations by recent OUS graduate students might merit further exploration.

Value of an Advanced Degree. The survey asked respondents to consider the balance between value and cost of their educational experience, a perceptual cost-benefit analysis. On balance, do they perceive the value of their education as "exceeding the cost," the cost as "exceeding the value," or the value and cost balancing to be "about equal?" Although "costs" were not defined for the respondents, it is reasonable to expect many considered this as the price of attending, the foregone earnings, the time devoted to studies, and/or the effect on personal relationships.

Two-thirds believe the value they received "exceeded the cost." *(Figure 14)* Over three-fourths say that their graduate or professional degree had already improved their employment or employment opportunities within the year after they completed their degrees. About half also believe the value of this educational experience will "increase over the next five years." Only about 7% say graduate education "has not been important" to them since completing their degrees.

This question was asked to ascertain the more personal and philosophical interpretation of the experience. In other words, was it worth the effort? However, when asked what they would change about their experience, several of those interviewed summed it up in one word, "*Tuition*!" One person interviewed commented about nonresident tuition levels, "*It is unfair that students from California continue to pay out-of-state higher tuition costs for the duration of their study in Oregon even thought I was paying Oregon state taxes for my entire period of study in Oregon.*"

It is important to note that the uniformity of tuition and other charges at the baccalaureate level is not characteristic of graduate and professional programs. These programs have very different credit hour requirements ranging from about 45 to 70 credit hours for a master's degree and 90 credit hours for a doctorate, which varies by internship and research requirements. Thus, the tuition charges for post-baccalaureate degrees are highly differentiated by degree level and major.

Satisfaction. Several questions were targeted to get an understanding of the satisfaction of OUS "customers" with the overall educational program and program components of advising, teaching, and research resources. Graduates were asked to rate their overall educational experience on a scale from 1 to 5, with 1 being "poor" and 5 being "excellent." Overall, 76% of these graduates rate their programs highly — 25% rate the experience a "5" and another 51%

rate the program a "4." As noted in the background section of this report, graduate satisfaction is an indicator of quality in the OUS Performance Indicator and Performance Funding process. *(Figure 15)*

Graduates were also asked to indicate their satisfaction with specific components of the program; teaching, advising, and research resources. Overall, graduates report they are quite satisfied with teaching, advising and research resources. Graduates tend to be slightly more satisfied with the quality of teaching (91%) than either research resources (86%) or advising (77%). *(Figure 16)*

Another indicator of satisfaction is whether an individual would choose to repeat the same experience again. If they could start all over again, 82% would select the same program; 74% would select the same institution; and 64% said they would select the same major professor.

The interviewers asked the respondents, "What was the greatest strength of the educational experience?" About half of the graduates report that the greatest strength of their experience is found in the program content including the information and theories, the research opportunities, practical experiences, and new perspectives. *(Figure 17)*

Respondents mentioned the experiences inside the classrooms and laboratories related to the program content. Several graduates identify research opportunities as the greatest strength, which are reflected in the comments of three graduates: "*My professor had a really good lab. He had up-to-date equipment for anything I wanted to work on.*" "*Being involved in state of the art research. I was involved with my advisor in collecting and analyzing data, it provided a lot of experience, which helped me get the job I have now.*" "*Being able to use magnetic resonance measurement instruments...*"

Other graduates identified the changes to their ways of knowing and thinking about issues as the greatest strength of their programs, as reflected in comments of two graduates: "*It taught me a different way to think. You have to think like a politician and business guy, and I didn't know how to do that.*" "*My graduate program stretched my mind.*"

Respondents also commented on the relationship between theory and practice as the strength: "*That it so closely matched the job requirements out in the real world.*" "*The blending of the theoretical and practical learning, I appreciated that many of the students had professional experience that they brought to the learning environment*" "*The graduate teaching fellowship positions.*"

One fourth of the respondents' comments highlighted the relationships made with faculty, other students, or professionals in the field as the greatest strengths of the experience. For example, one graduate said, "*Probably the personal involvement from faculty. I liked the one-on-one time. [I received] very professional advice.*" Another graduate notes, "*I would say the expertise of the professors. I was very impressed with the quality of the professors in that department. I had gone to several universities and I have never found a faculty so dedicated and well prepared.*"

Many noted the gains to their careers or personal well being, as reflected in comments of two graduates: "*Allowed me to increase my salary; more access to information than I had before; increased computer knowledge.*" "*It taught me a lot about myself; and how I work, team building, group work, understanding the dynamics of working with other people to get a job done, time management, and just the basic extra knowledge that I have. It was diverse, it gave us a bit of everything.*"

A few graduates mentioned the personal convenience of their programs as being the strength: "*It was very flexible...we had a lot of distance classes and on-line classes. I live in a rural area* [and] *it was very helpful.*"

III. Conclusions

The survey results show conclusively that, on average, OUS advanced degree recipients had positive experiences in graduate/professional school, reported high levels of satisfaction with their graduate education, were highly employable upon graduation, and have succeeded well in the short time since receiving their degrees. With the majority of degree completers remaining in the state, OUS graduates add value to Oregon. What is their economic future? Will the success of OUS graduates in future surveys be as high?

The Economic Caveat

It is important to note that graduate success as indicated by labor force status is not entirely within the control of the OUS institutions. Between 1990 and 2000, Oregon's economy was characterized by strong growth (28%), more reliance on high technology employment, and increased population migration from California of highly educated workers. Professional and technical occupations gained over one third more jobs and managerial positions grew by 10%. These 1999-00 OUS graduates entered, or re-entered, the workforce at the tail end of Oregon's growth economy.

Between 2000 and 2010, the Oregon Employment Department forecasts only a 12.5% employment growth (or 204,000 jobs). The high growth rates for professional and technical workers in the previous ten years are likely to be half of what they have been in the next ten years. So, the employment outlook appears good for highly educated and talented people if they take into consideration where the jobs are.

The ten-year projections for selected occupations that require at least a bachelor's degree in Oregon include:

- 8.2% increase for social workers (698 net job growth for 2000-10 and 146 openings in 2001);
- 10.2% increase for elementary teachers (1,647 net job growth for 2000-10 with 441 openings in 2001);

- 16.8% increase for postsecondary teachers (net job growth for 2000-10 of 2,529 or 315 openings in 2001);

- 18.1% increase for registered nurses (2,949 net job growth for 20000-10 with 649 openings in 2001); and

- 48.2% increase for computer engineers (3,153 net growth for 2000-10 with 351 openings in 2001)(*Oregon Labor Trends,* October 2001).

In what sectors are graduates likely to find employment? The Oregon Employment Department forecasts that manufacturing industries overall will be characterized by slow growth (+2%) and the non-manufacturing industries overall will be characterized by increased growth (+14%).

- Above average growth projected for manufacturing industries include electronic and other electrical equipment (+15%), printing and publishing (+8%) and transportation equipment (+7%). Declining manufacturing industries include lumber and wood products (-6%), primary metals (-16%), and food products (-5%).

- Above average growth projected for non-manufacturing industries include business services (+23%), services (+19%), fire, insurance, and real estate (+19%), and social services (+16%) (*Oregon Labor Trends,* August 2001 and October 2001).

The economy and other events, such as U.S. foreign policy, are likely to influence labor force participation and enrollment in colleges and universities in the near term. Economic stagnation or recession could lead to reduced spending for higher education and higher tuition in both the public and private sectors of higher education in the United States.

Compared to the past ten years, Oregon and the nation are faced with an economic slowdown. In previous economic downturns, graduate and professional enrollments have tended to increase throughout the United States, including Oregon, as labor force participation declined. The shortfall in revenue projections for Oregon's state general fund will affect the budgets of public sector agencies, many of which hire master's level graduates. Further, Oregon reported the second highest unemployment rate in the country this quarter.

How long and how much will Oregon economy be affected? Given this turbulent environment, further investigation into Oregon's workforce needs in occupations requiring postsecondary education and beyond is necessary for effective academic program planning by Oregon's postsecondary institutions.

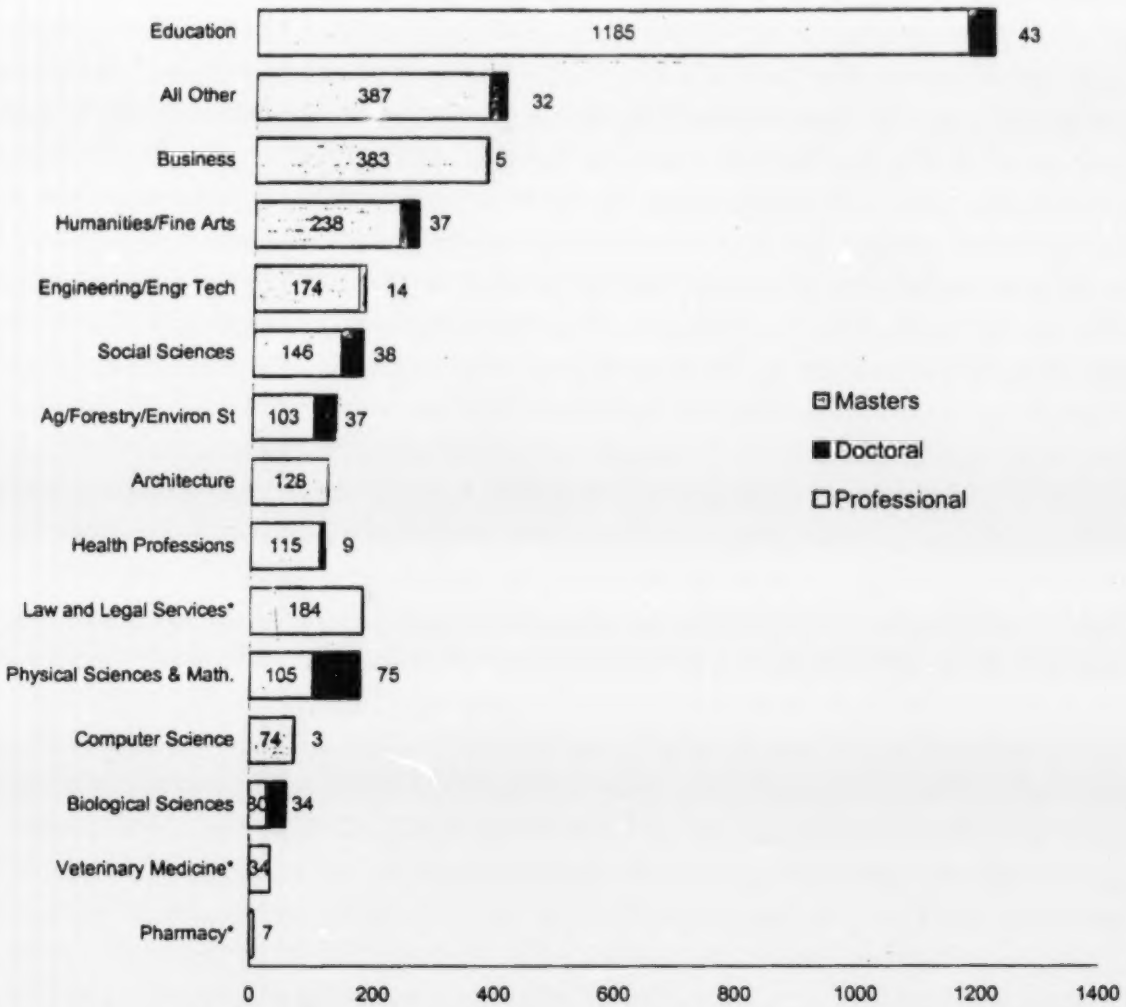
FACTS – DEGREES AWARDED

OUS Advanced Graduates, 1999-00

Figure 1

Advanced degrees awarded by OUS in 1999-00 by discipline

N=3,620



Note: *All Other* includes degrees awarded in area, ethnic and cultural studies; marketing operations, marketing and distribution; home economics; interdisciplinary/multidisciplinary studies; science technologies; parks, recreation, leisure and fitness studies; protective services; and public administration and services.

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

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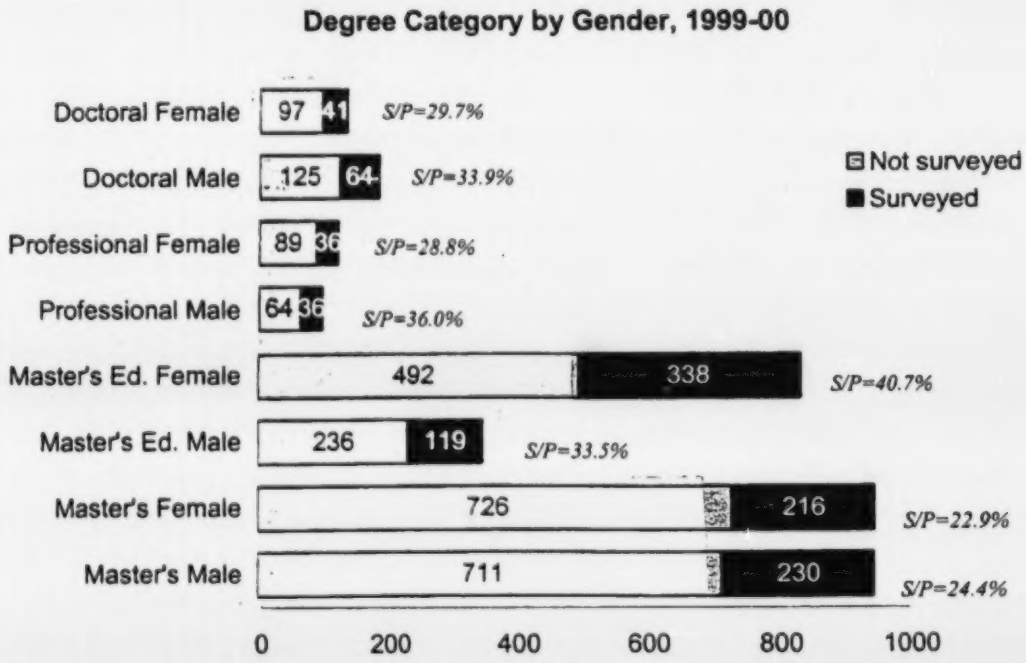
SURVEY - DEMOGRAPHICS

OUS Advanced Graduates, 1999-00

Figure 2

Gender of respondents

N=1,061



Note: One Master's of Education and one Doctoral degree recipient declined to respond.
S/P=survey sample as a proportion of the total population in a given degree category.
Source: Gender breakdown by degree level for total population of degree recipients, *OUS Fact Book* 2000.

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

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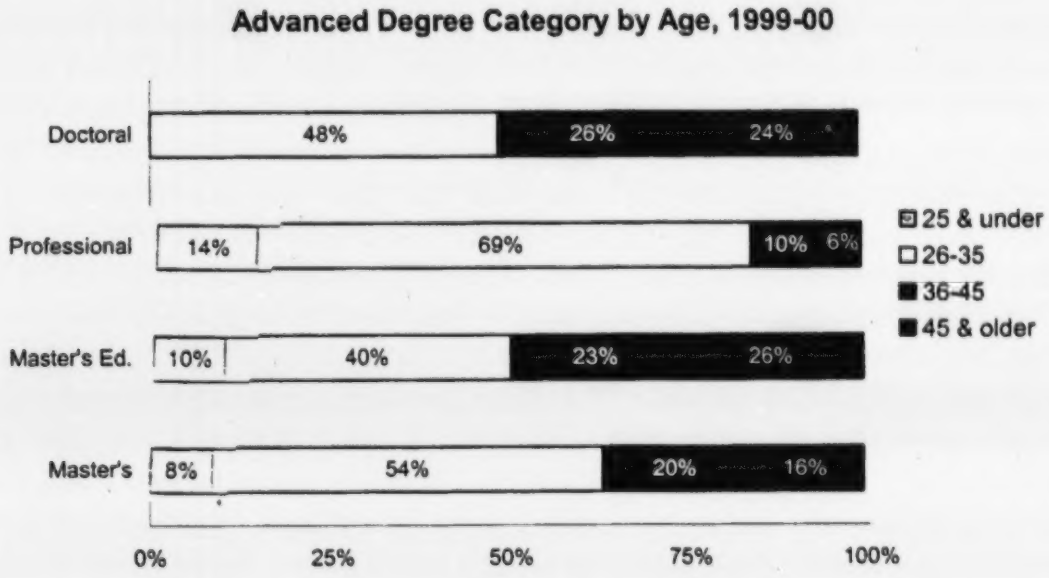
SURVEY - DEMOGRAPHICS
OUS Advanced Graduates, 1999-00

Figure 3
Age of respondents
N=1,063



Note: Source for age breakdown of total population of degree recipients not available to determine sample representation.

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

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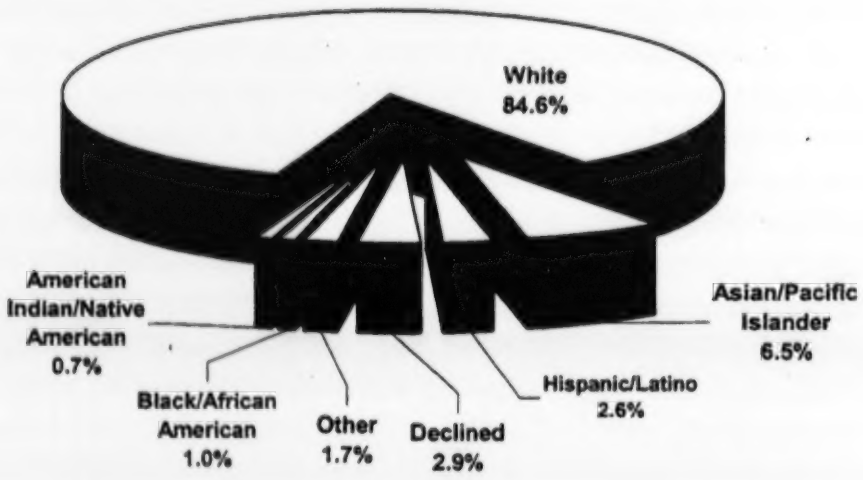
SURVEY - DEMOGRAPHICS
OUS Advanced Graduates, 1999-00

Figure 4
Race/ethnicity of respondents
N=1,063

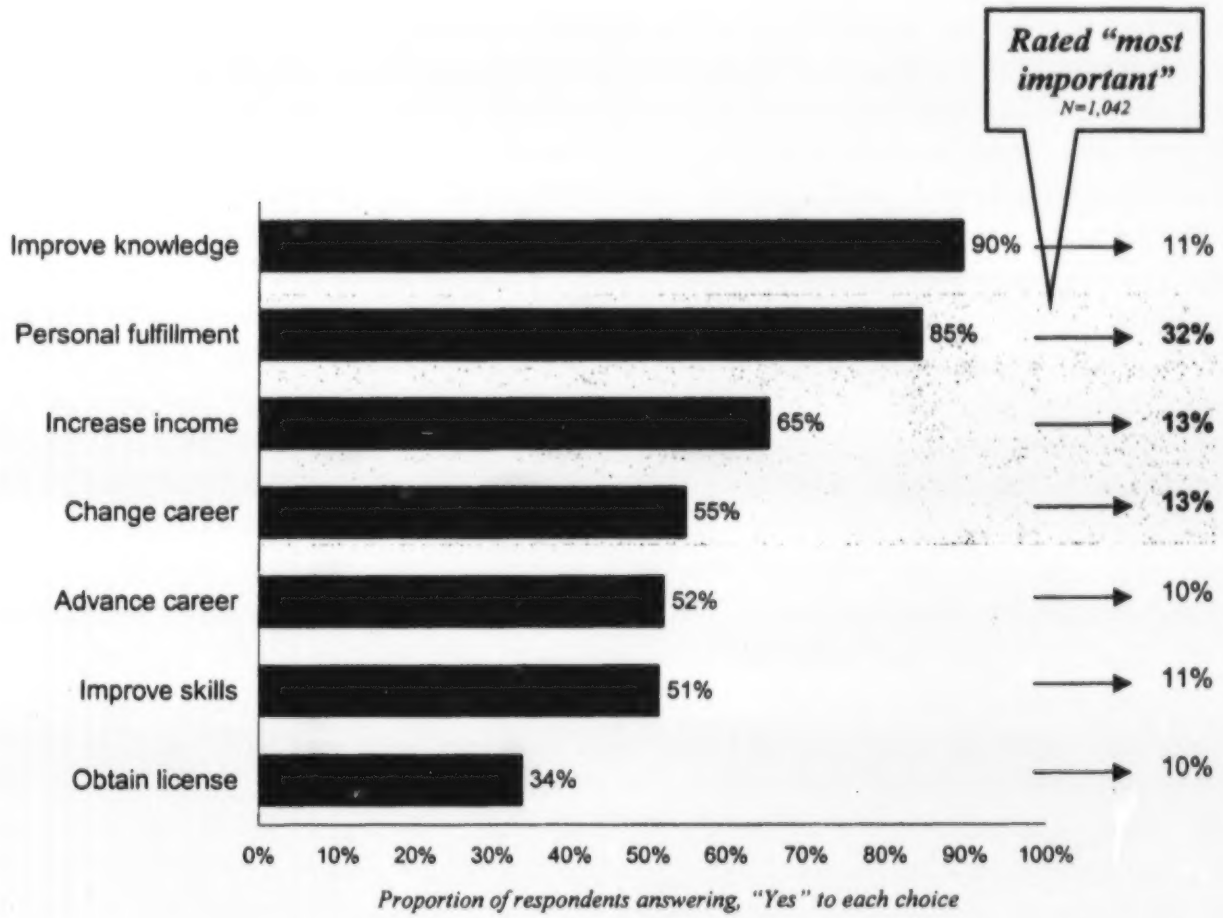


Note: NS=not surveyed; S=surveyed; S/NS=proportion of those surveyed to those not surveyed.
Source: Race/ethnicity breakdown of total population of degree recipients, OUS Office of Institutional Research Services.

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

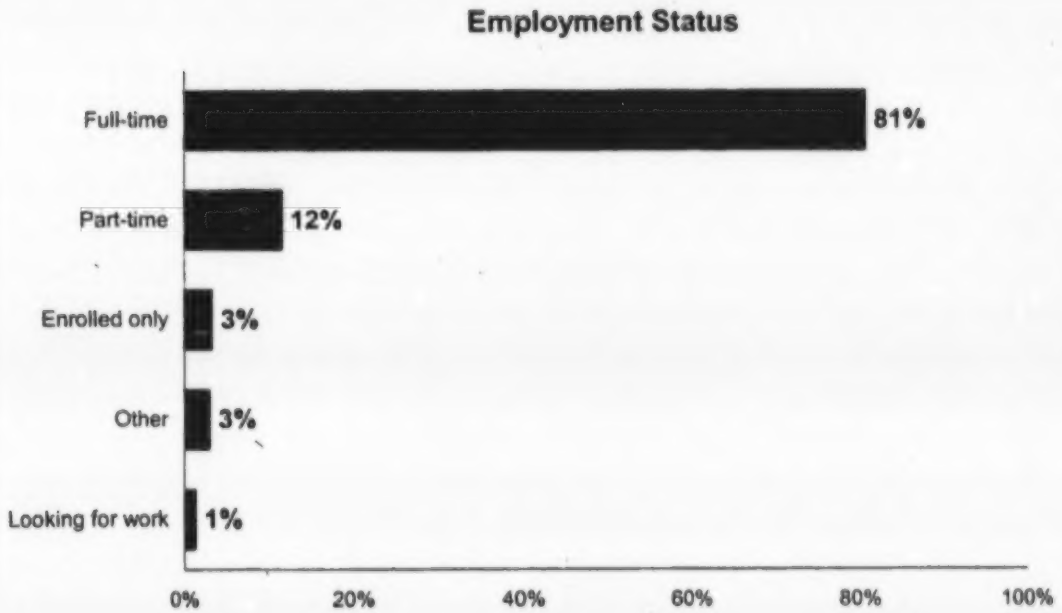
Figure 5

Reasons for pursuing an advanced degree
N=1,063



Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

Figure 6
Labor force participation
N=1,063



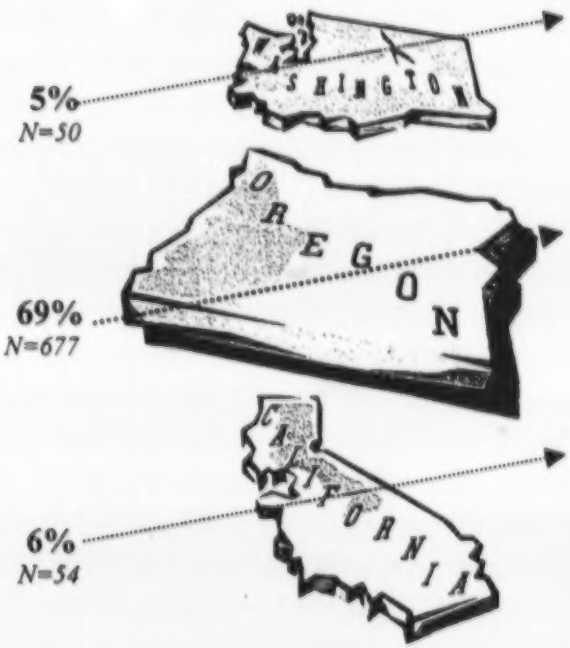
Note: Part-time includes respondents who reported being both enrolled and employed (50/50).

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

SURVEY – EMPLOYMENT
OUS Advanced Graduates, 1999-00

Figure 7
Employment location and sector
N=981

Employment by state



Employment by sector
(within each state)

		Of that 5%:
Private	26%	13
Public	70%	35
Nonprofit	2%	1
Self-employed	2%	1

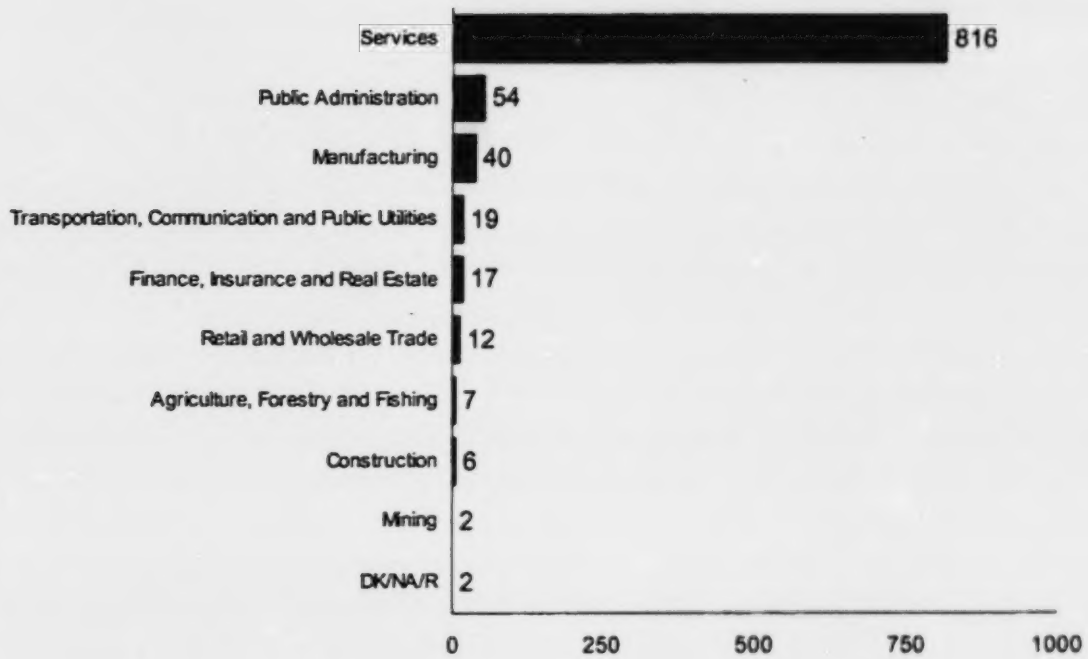
		Of that 69%
Private	22%	148
Public	66%	447
Nonprofit	9%	58
Self-employed	3%	22
Other	.2%	2

		Of that 6%
Private	41%	22
Public	48%	26
Nonprofit	11%	6
Self-employed	0%	0

Note: Includes full- and part-time employment.

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

Figure 8
Employment by Industry
N=975

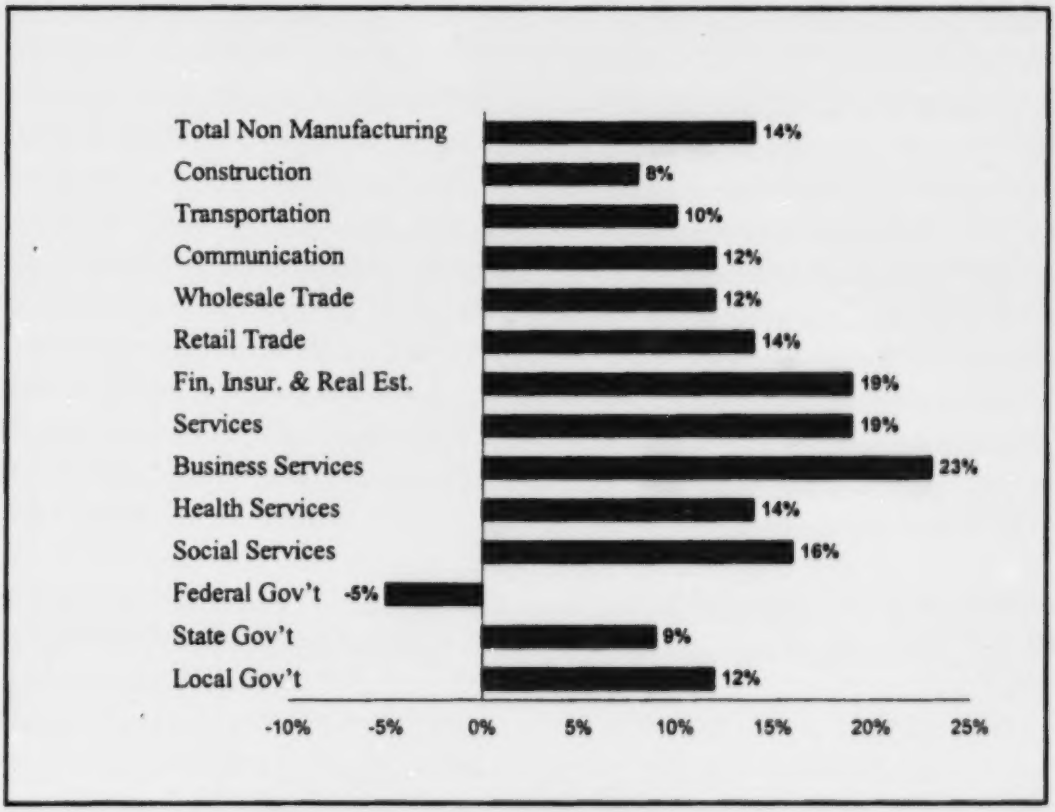


Note: Services include recreation; personal; private households; business; automotive; miscellaneous repairs; entertainment; health; legal; fine arts; membership associations; engineering/accounting/research and related services.

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

Figure 8A

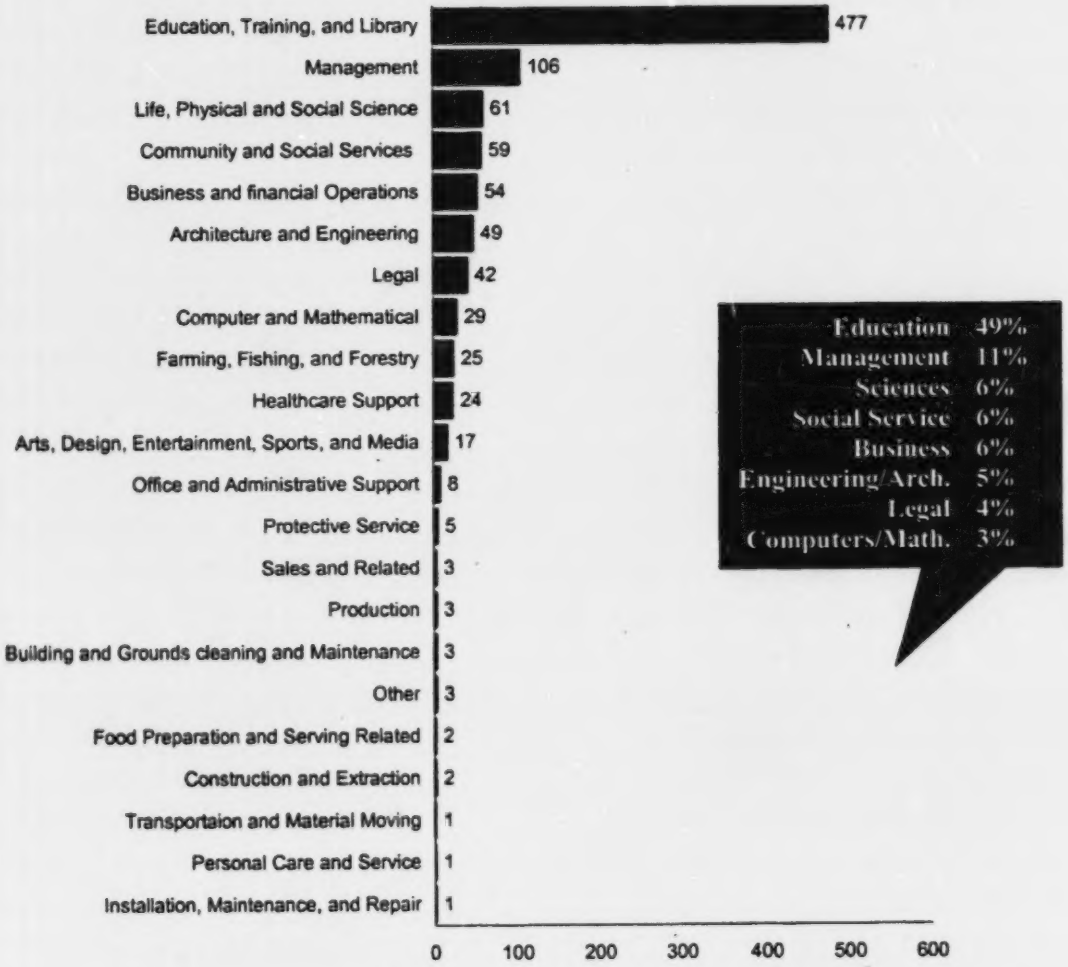
Projected non-manufacturing employment change
Selected Oregon industries, 2000-2010



Source: Oregon Employment Department, August 2001.

SURVEY – EMPLOYMENT
OUS Advanced Graduates, 1999-00

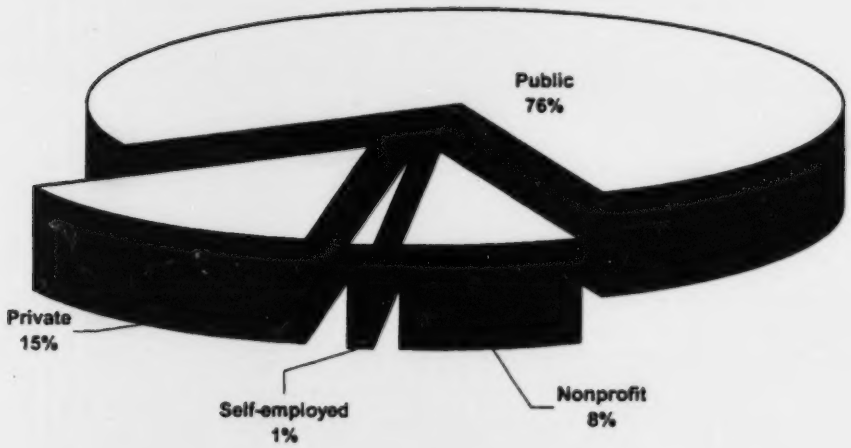
Figure 9
Employment by occupation
N=978



Note: Three respondents DK/NR/R from the total number of respondents who reported full- or part-time employment (981).

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

Figure 10
Second language use in the workplace
N=245



Note: From proportion of respondents who reported working either full- or part-time.

Careers That Commonly Use Multilingual Skills

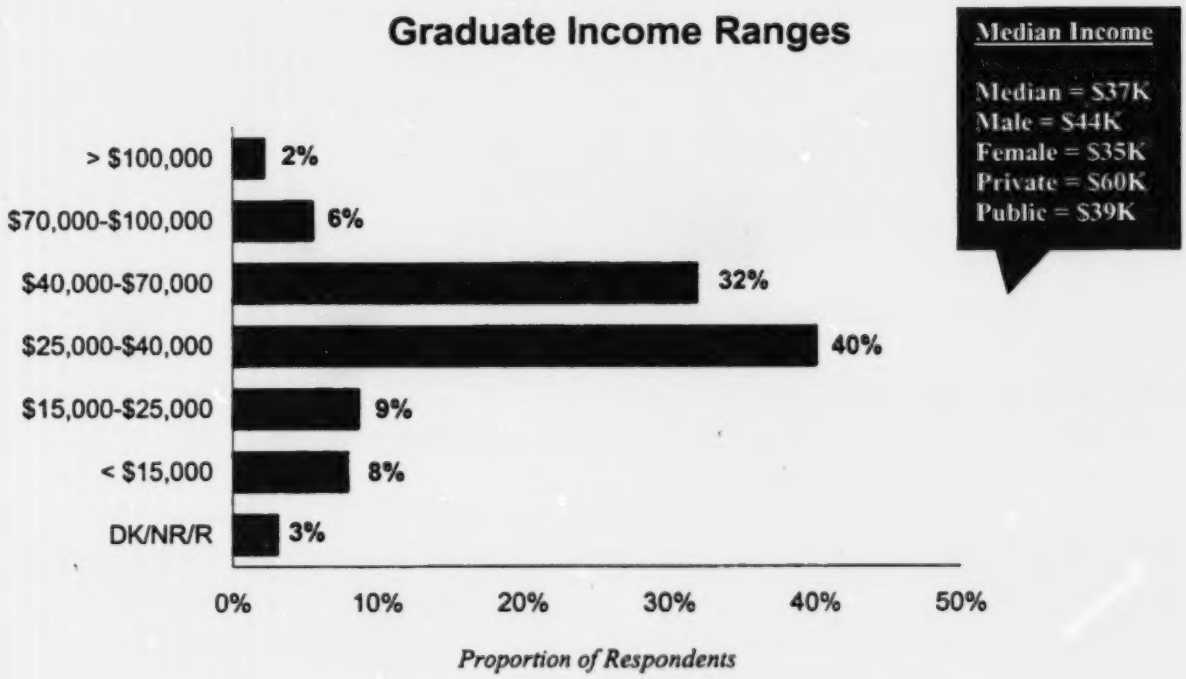
- Banking and finance occupations
- Human resources
- Interpreter
- Journalist
- Nursing and other medical occupations
- Social service
- Teacher

Source: Oregon Employment Department, Labor Trends May 2001

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

SURVEY – INCOME
OUS Advanced Graduates, 1999-00

Figure 11
Personal income
N=1,063



Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

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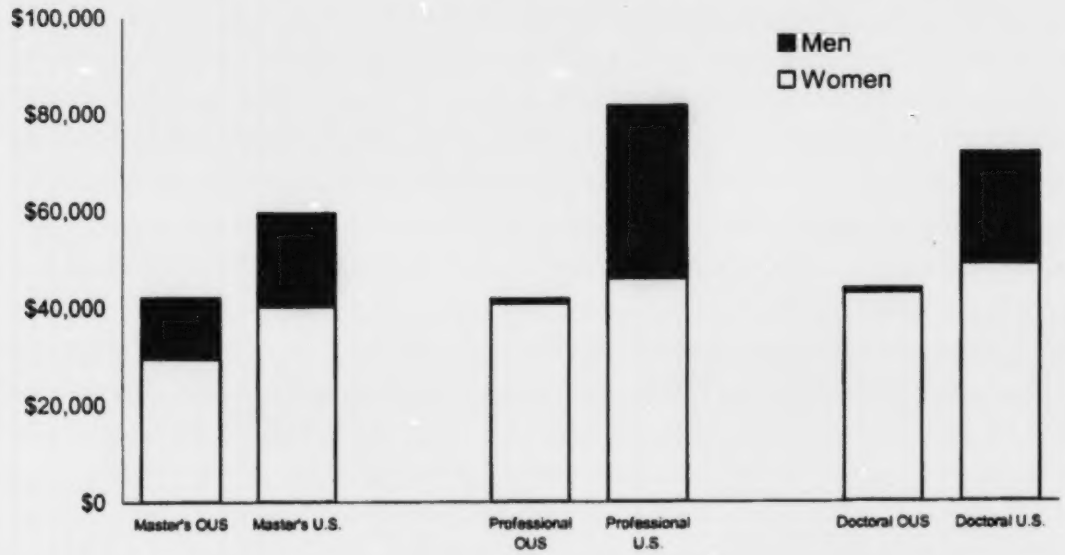
SURVEY – INCOME

OUS Advanced Graduates, 1999-00

Figure 12

Median income by degree attainment level

OUS Survey Respondents in 2000 Compared to US Census 2000



Degree Level	Women	Men	Gender Gap
Master's OUS	$ 29,586	$ 41,980	$ (12,394)
Master's U.S.	$ 40,249	$ 59,376	$ (19,127)
OUS/U.S. Income Gap	$ (10,663)	$ (17,396)	
Professional OUS	$ 40,833	$ 41,668	$ (835)
Professional U.S.	$ 45,999	$ 81,602	$ (35,603)
OUS/U.S. Income Gap	$ (5,166)	$ (39,934)	
Doctoral OUS	$ 42,927	$ 43,750	$ (823)
Doctoral U.S.	$ 48,894	$ 71,738	$ (22,844)
OUS/U.S. Income Gap	$ (5,967)	$ (27,988)	

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

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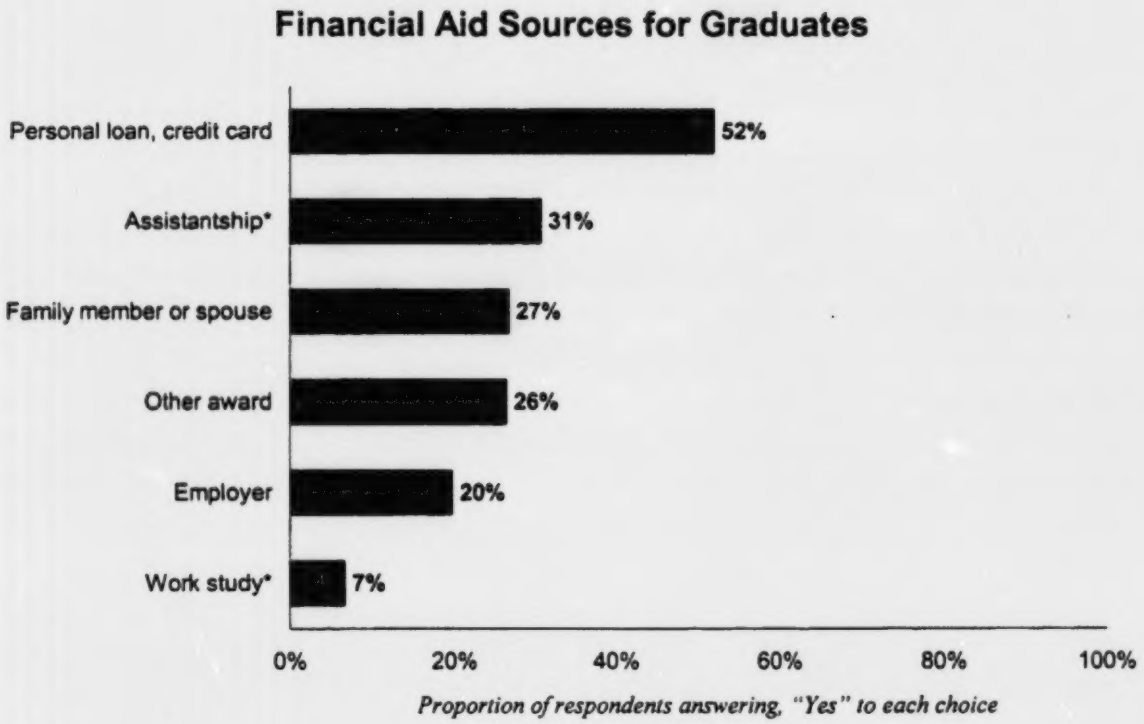
Figure 13
How graduates financed their education
N=882

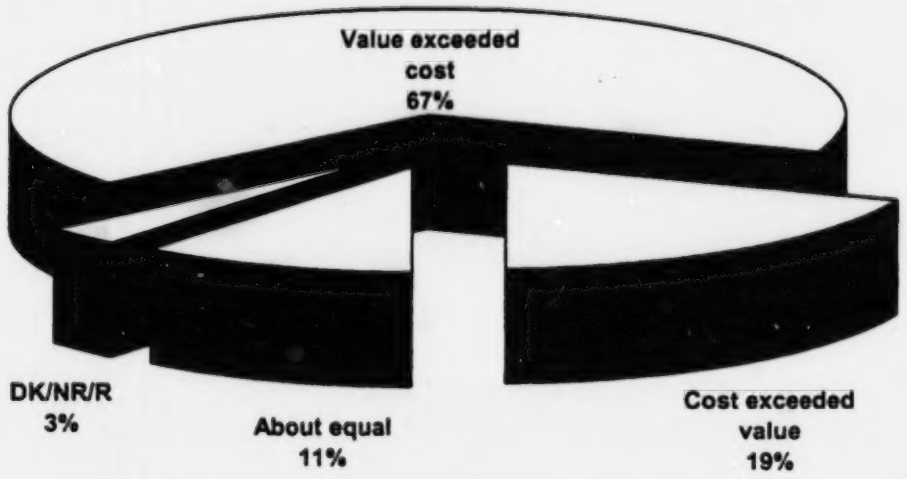


N=880
Other includes any other type of grant, scholarship, fellowship, or tuition waiver.

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

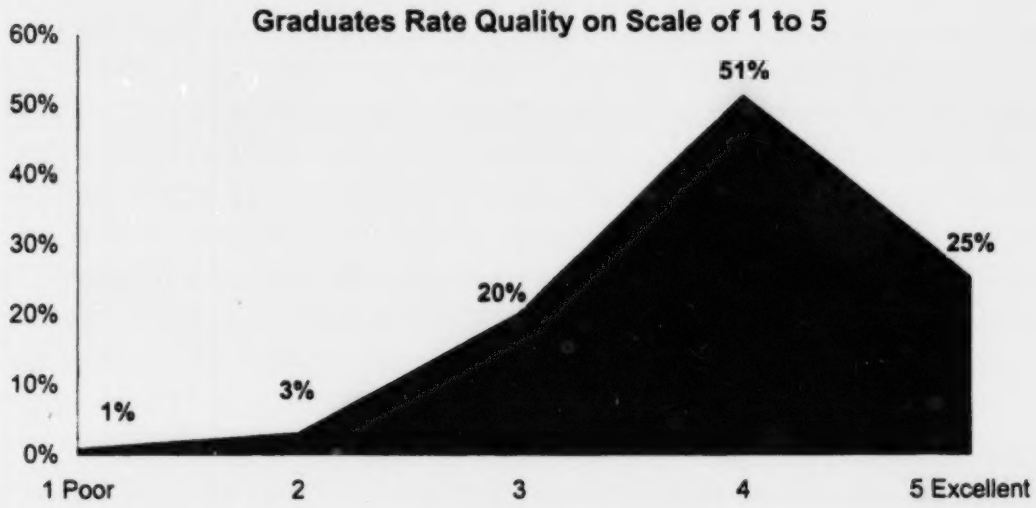
SURVEY – SATISFACTION
OUS Advanced Graduates, 1999-00

Figure 14
Value of an advanced degree
N=1,063



Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

Figure 15
Quality of OUS education
N=1,063



Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

Figure 16

Teaching, advising and research resources

N=1,063

Note: 3% of respondents declined to respond or had varied opinions regarding both advising and research resources.

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2001.

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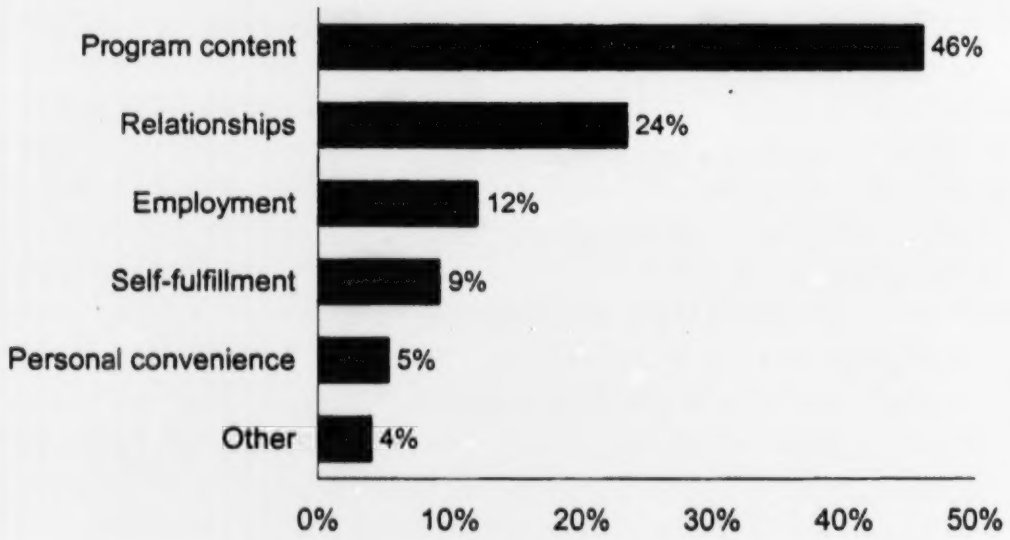
SURVEY – SATISFACTION
OUS Advanced Graduates, 1999-00

Figure 17
Reported strengths
N=1,063



Note: Two respondents DK/NR/R included in other.

Source: OUS Office of Academic Affairs. "The Status of the 1999-00 OUS Advanced Graduates: One Year Later" (12/01), Survey of Employment and Satisfaction of Graduates of OUS Institutions, summer 2000.

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